

**REMARKS**

The Office Action of May 20, 20008, has been carefully considered.

Claims 14-18, 21-22, 25-26 and 28 have been rejected under 35 USC 102(b) as anticipated by Cagliostro et al.

Two amendments have been made to Claim 14. The starting material is now a resin impregnated paper base body; the use of fleece as the base body has been removed.

In addition, the step of "stabilizing and/or compressing" has been changed to "stabilizing and/or consolidating." The term "consolidating" was considered to be a better translation of the original German term "verdichtet" so this amendment is not considered to constitute new matter and is considered to be consistent with the actual step described in the specification of material precipitation from the gaseous phase.

Amendments consistent with the amendments to Claim 14 have been made in Claims 16, 17, 18, 19 and 23.

The steps of Cagliostro et al cited in the Office action are found at column 2, line 56 through column 3, line 6 and include (a) pyrolyzing a loosely woven fabric (not a paper) having a honeycomb shape, (b) depositing at least one layer of ceramic material on the pyrolyzed fabric of step (a) and (c) recovering the coated ceramic honeycomb structure. A further step is disclosed in which the pyrolyzed fabric of the structure is slowly removed by pyrolysis and oxidation.

Applicants note initially that step (a) of Cagliostro et al involves pyrolyzing a loosely woven fabric, and not a paper base material.

While steps (b) and (c) of Cagliostro et al taken together can correspond to the stabilizing and/or consolidating step of the invention, Applicants pointed out in the previous Amendment that step (d) of Cagliostro et al does

not correspond to the final steps of the invention, because Cagliostro et al does not coat the stabilized and/or consolidated pyrolyzed base body with a carbon-containing solution before further pyrolysis. The Office action maintains that two distinct coating steps are not required under the claim language of now canceled Claim 1 and that such a limitation is also not required under the claim language of Claim 13. The Office action states "the Examiner can foresee no reasoning why a simple coating step such as is disclosed in the Cagliostro reference which both stabilizes and coats the base carbon body would not be properly construed to read upon Applicants' claim language."

Simply put, the steps recited by Cagliostro et al do not read upon Applicants' claim language because those steps are different from what is claimed. Applicants require three separate steps to occur, the first of which is stabilizing and/or consolidating the pyrolyzed base body. The result of this step, a stabilized and/or consolidated pyrolyzed base body is then coated with a carbon-containing solution. After coating, the coated, stabilized and/or consolidated pyrolyzed base body is then pyrolyzed.

Cagliostro et al does disclose a stabilizing and/or consolidating step, but to the best of Applicants' interpretation, this step involves only material deposition from the gaseous phase, as does corresponding step of the invention, as recited, for example, in Claim 16. Only after this step is completed, is the body then coated with a carbon-containing solution. *Cagliostro et al does not coat the stabilized body with a carbon-containing solution, and hence it cannot anticipate the claimed invention.*

The object of the coating step after stabilization of the body is to increase the mechanical properties of the final product. Cagliostro et al discloses no such step.

Withdrawal of this rejection is requested.

Claims 14-18 and 21- 28 have been rejected under 35 USC 103(a) over Bickerdike et al in view of Merz.

Bickerdike et al is directed to a process for making a massive fibrous carbon material comprising carbon fibers which are the conversion products of natural or synthetic organic fibers. Bickerdike et al starts with a random mass of fibers such as cotton wool, or similar spun or woven fibers. The fibers may be impregnated with a synthetic resin before pyrolysis, following which carbon is deposited from the gas phase. If the product is still porous, it may be treated with furfuryl alcohol, followed by polymerization and further pyrolysis.

The Office action recognizes that the Bickerdike et al reference does not disclose the use of a honeycomb shaped base body, an aramid paper base body or a siliconization step, but has cited the Merz reference to provide the missing steps. Merz, however, has nothing in common with the Bickerdike et al reference except for an initial step of carbonization. Merz is directed to a method for producing a *composite ceramic body* with a starting material which may be honeycomb paper and with a step of exposing the paper after carbonization to a silicon-containing substance and further heating to produce silicon carbide.

Given the substantial differences in the final products of these references, there is no reason for one of ordinary skill in the art to combine Merz with Bickerdike et al. The object of Bickerdike et al is entirely different from Merz, to obtain disks or tubes of carbon or graphite material. Bickerdike et al does not intend to obtain a silicon carbide material such as is used by Merz for combustion engines, gas turbines, rocket motors, furnace equipment and the like (column 8, lines 23-24). Since the final product of

Bickerdike et al does not compare at all with the final product of Merz, one of ordinary skill in the art would have absolutely no motivation to change the process of Bickerdike et al by substituting a starting material which is not suggested by Bickerdike et al, and utilizing a step of siliconization which is also not suggested by Bickerdike et al. The product of such a combination of references does not suit the purpose of either reference. It is only Applicants who have suggested using a honeycomb starting material, followed by pyrolysis, stabilization, coating with a carbon-containing liquid, and a further pyrolysis step. The statement in the Office action that these steps are suggested by the combination of references amounts to no more than a hindsight reconstruction of the invention based upon the teaching of the present application.

Withdrawal of this rejection is requested.

Claims 19 and 20 have been rejected under 35 USC 103(a) over Bickerdike et al and Merz in further view of Luhleich. The Bickerdike et al and Merz references have been discussed in detail above, and Applicants rely on that discussion.

Luhleich et al has been cited to show a step of providing a protective carbide layer on a carbon-based substrate. Luhleich et al, however, does not otherwise relate to the process of the invention and does not cure the defects discussed above with regard to Bickerdike et al and Merz. Withdrawal of this rejection is requested.

Withdrawal of these rejections is requested.

In view of the foregoing amendments and remarks, Applicants submit that the present application is now in condition for allowance. An early allowance of the application with amended claims is earnestly solicited.

Respectfully submitted,



Ira J. Schultz  
Registration No. 28666  
Attorney for Applicants  
(703) 837-9600, ext. 23

LAW OFFICES  
**DENNISON, SCHULTZ & MACDONALD**  
SUITE 105  
1727 KING STREET  
ALEXANDRIA, VIRGINIA 22314-2700  
\_\_\_\_\_  
703 837-9600